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Memory Profiling using Hardware Counters

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↑ ABSTRACT

Although memory performance is often a limiting factor in application performance, most tools only show performance data relating to the instructions in the program, not to its data. In this paper, we describe a technique for directly measuring the memory profile of an application. We describe the tools and their user model, and then discuss a particular code, the MCFbenchmark from SPEC CPU 2000. We show performance data for the data structures and elements, and discuss the use of the data to improve program performance. Finally, we discuss extensions to the work to provide feedback to the compiler for prefetching and to generate additional reports from the data.

↑ CITED BY 2

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